

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q66255

Robert HOFNER, et al.

Appln. No.: 09/989,377

Group Art Unit: 2667

Confirmation No.: 1293

Examiner: Christopher P. GREY

Filed: November 21, 2001

For: APPARATUS AND METHOD FOR LOAD BALANCING IN SYSTEMS HAVING  
REDUNDANCY

**REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41**

**MAIL STOP APPEAL BRIEF - PATENTS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.41, Appellant respectfully submits  
this Reply Brief in response to the Examiner's Answer dated [Press F11] . Entry of this Reply  
Brief is respectfully requested.

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REPLY BRIEF UNDER 37 C.F.R. § 41.41  
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**STATUS OF CLAIMS**

Claims 1-38 are pending and are the basis of this Appeal. Claims 1-38 stand rejected.

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

1. Rejection of claims 1-3, 5-7, 9, 10, 16 and 22 under 35 U.S.C. 103(a) as being unpatentable over Wolff in view of Peterson.
2. Rejection of claims 4, 8, 11, 12, 13, 14, 15, 17-20, 23-26 and 28-38 under 35 U.S.C. 103(a) as being unpatentable over Wolff in view of Peterson et al. in further view of Richter.
3. Rejection of claims 21 and 27 under 35 U.S.C. 103(a) as being unpatentable over Wolff in view of Richter.

### **ARGUMENT**

As an initial matter, the Applicants respectfully submit that pages 1-17 are a copy of the Final Office Action dated December 14, 2005. Since no additional arguments are raised in these pages, the Applicants do not discuss the arguments repeated in these pages and merely incorporate by reference the arguments made in the Appellants' Brief filed February 26, 2007.

The responses to Appellants' arguments provided on pages 18-19 of the Examiners' Answer are discussed further herein. Responding to the Applicants arguments that Wolff does not teach or suggest redundancy of resources, the Examiner points to Fig. 1B of Wolff where two servers 104B and 106B share the same memory resource 118. The Appellants respectfully submit that there is nothing to suggest that one of the servers, for example, 104B is a redundant resource of the other server, or able to function in that manner. The Examiner refers to col. 6, lines 32-35 where Wolff suggests that "same" complementary processes 104PB and 106PB are provided for handling concurrent I/O request from resource 118. However, the Appellants respectfully submit that: (a) the word "same" is an insertion made by the Examiner with no proof whatsoever in Wolff; (b) removing the word "same" argued by the Examiner leads to the fact that processes 104PB and 106PB are not the same, and at best are complementary, and enabled to handle concurrently I/O requests from either of clients 100A for a file system resource; and (c) this in itself does not suggest that one of the processes (or for that matter, one of the servers) is redundant.

Applicants further respectfully submit that the Examiner's argument that redundancy *by definition is merely characterized by repetition, where the functions of the servers are the same, and they both access the same memory resource*, is incomplete. Firstly, the same memory resource is not necessarily a requirement for a redundant system. Secondly, such a system requires means that enable it to cause one resource to be able to replace another system that may have failed. Lack of such means would not enable such a system to perform as a redundant system.

Importantly, claim 1 requires that the computer transfer tasks from one resource to the redundant resource, if the first resource fails. However, there is no suggestion that in case one of the servers or processes fails, the system of Wolff transfers the task to the other server or process. Furthermore, Wolff does not suggest load-balancing between a network resource and a matching redundant resource as required by the present invention.

As noted in the Appellants' Brief, while Wolff provides the ability of balancing loads between a plurality of networked resources, it does not suggest use of redundant portions of the system that are normally kept idle awaiting a failure in the system. The fact that an alternate path exists in a networked system does not suggest that there is a redundant path as defined by applicants, specifically, two independent communication paths. Examiner argues that alternate path 76 is an independent communication path from path 74. Examiner argues that these *paths are independent due to the fact that Wolff depicts them as 2 separate (independent) lines (one straight line the other a dotted line)*. Applicants respectfully disagree with the Examiner's assertion that is not based on fact. Specifically, Wolff shows these two admittedly alternate paths

that go through the network cloud 108. There are many alternate paths that exist in this network of paths. All of these paths may be dependent paths, unless specifically designed to ensure independency. Nothing in Wolff suggests any independent alternate paths exist. No such independent paths are shown by Peterson. Therefore, the combined teaching of Wolff in view of Peterson does not suggest the present invention.

The Examiner incorrectly contends that the Appellants admit to load balancing between a resource and a redundant matching resource. The Appellants merely noted that Wolff suggests load balancing as a general proposition. However, it does not suggest load balancing between a network resource and a matching redundant resource as required by the present invention.

In addition, the Examiner contends that since two resources are shown to be the same as in Peterson they must be redundant. This is believed to be an unreasonable stretch. Just because two resource are the same in a system does not necessarily mean that they are redundant. In fact, as discussed in detail in the Appellants' Brief, Peterson suggests a "mirrored memory." For reasons that are discussed in detail in the Appellants' Brief, such mirrored memory cannot provide load-balancing as required by the present invention.

Furthermore, the Examiner contends that the claim does not require a redundant communication path. However, the claim clearly requires at least two independent paths between a terminal node, a network resource and its matching redundant network resource. Since Wolff does not suggest a redundant matching network resource, it could not be suggesting such an independent path to it.

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**CONCLUSION**

For the above reasons as well as the reasons set forth in Appeal Brief, Appellant respectfully requests that the Board reverse the Examiner's rejections of all claims on Appeal.

An early and favorable decision on the merits of this Appeal is respectfully requested.

Respectfully submitted,

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